TEST REPORT

Product Name:	Module
Trade Mark:	CINTERION
Model No. / HVIN:	PLS83-X
Report Number:	2303164460RFM-2
Test Standards:	FCC 47 CFR Part 22,FCC 47 CFR Part 24 FCC 47 CFR Part 27,FCC 47 CFR Part 90 RSS-130 Issue 2, RSS-132 Issue 4 RSS-133 Issue 6,Amendment 1 RSS-139 Issue 4, RSS-199 Issue 3, RSS-Gen Issue 5
FCC ID:	QIPPLS83-X
IC:	7830A-PLS83X
Test Result:	PASS
Date of Issue:	July 10, 2023

Prepared for:

Telit Cinterion Deutschland GmbH
Siemensdamm 50, 13629 Berlin, Germany

Prepared by:

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Approved by: Kevin Liang — Assistant Manager

Date: July 10, 2023

Version

Version No.	Date	Description
V1.0	July 10, 2023	Original

CONTENTS

1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	Telit Cinterion Deutschland GmbH
Address of Applicant:	Siemensdamm 50, 13629 Berlin, Germany
Manufacturer:	Telit Cinterion Deutschland GmbH
Address of Manufacturer:	Werinherstr.81, 81541 Munich, Germany

1.2 EUT INFORMATION

1.2.1 General Description of EUT

Product Name:	Module	
Model No.:	PLS83-X	
Trade Mark:	CINTERION	
DUT Stage:	Production Unit	
EUT Supports Function:	UTRA Bands:	Band II/ Band IV/ Band V
	E-UTRA Bands:	FDD Band 2/ Band 4/ Band 5/ Band 12/ Band 13/ Band 14/ Band 25/ Band 26/ Band 66/ Band 71
Software Version:	02.110 (Provided by the customer)	
Hardware Version:	Rev 4.2 (Provided by the customer)	
Sample Received Date:	August 25, 2020	
Sample Tested Date:	September 1, 2020 to September 24, 2020	
Note: There are two SIM types of configurations for this model: one is configured with both SIM and eSIM, and the other is configured with only SIM.		
Remark: The above EUT's information was provided by customer. Please refer to the specifications or user's manual for more detailed description.		

1.2.2 Description of Accessories

None

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Support Networks:	LTE	
Type of Modulation:	LTE Band 2/4/5/12/13/14/25/26/66/71:	QPSK, 16QAM
Antenna Type:	External Antenna	
Antenna Gain:	LTE Band 2:	50 ohm terminal (0 dBi)
	LTE Band 4:	50 ohm terminal (0 dBi)
	LTE Band 5:	50 ohm terminal (0 dBi)
	LTE Band 12:	50 ohm terminal (0 dBi)
	LTE Band 13:	50 ohm terminal (0 dBi)
	LTE Band 14:	50 ohm terminal (0 dBi)
	LTE Band 25:	50 ohm terminal (0 dBi)
	LTE Band 26:	50 ohm terminal (0 dBi)
	LTE Band 66:	50 ohm terminal (0 dBi)
	LTE Band 71:	50 ohm terminal (0 dBi)
Normal Test Voltage:	3.8 Vdc	
Extreme Test Voltage:	3.2 to 4.5Vdc	
Extreme Test Temperature:	-30 °C to +65 °C	

Summary of Results:								
Bands	BW (MHz)	Modulation	Frequency Range (MHz)	Max RF Output Power (dBm)		ERP/EIRP (W)	99% BW (MHz)	Emission Designator
				Conducted (Average)	ERP/EIRP (Average)			
2	1.4	QPSK	1850.7-1909.3	23.36	23.36	0.21677	1.1084	1M11G7D
		16QAM		23.03	23.03	0.20091	1.1033	1M10W7D
	3	QPSK	1851.5-1908.5	23.44	23.44	0.22080	2.7071	2M71G7D
		16QAM		22.73	22.73	0.18750	2.7119	2M71W7D
	5	QPSK	1852.5-1907.5	23.29	23.29	0.21330	4.5338	4M53G7D
		16QAM		22.89	22.89	0.19454	4.5258	4M53W7D
	10	QPSK	1855.0-1905.0	23.40	23.40	0.21878	8.9839	8M98G7D
		16QAM		22.80	22.80	0.19055	8.9949	8M99W7D
	15	QPSK	1857.5-1902.5	23.30	23.30	0.21380	13.457	13M5G7D
		16QAM		22.88	22.88	0.19409	13.476	13M5W7D
	20	QPSK	1860.0-1900.0	23.46	23.46	0.22182	17.946	17M9G7D
		16QAM		22.89	22.89	0.19454	17.969	18M0W7D
4	1.4	QPSK	1710.7-1754.3	22.95	22.95	0.19724	1.1050	1M11G7D
		16QAM		21.99	21.99	0.15812	1.0997	1M10W7D
	3	QPSK	1711.5-1753.5	23.00	23.00	0.19953	2.7036	2M70G7D
		16QAM		21.85	21.85	0.15311	2.7054	2M71W7D
	5	QPSK	1712.5-1752.5	23.01	23.01	0.19999	4.5246	4M52G7D
		16QAM		21.87	21.87	0.15382	4.5368	4M54W7D
	10	QPSK	1715-1750	22.90	22.90	0.19498	8.9776	8M98G7D
		16QAM		21.75	21.75	0.14962	9.0049	9M00W7D
	15	QPSK	1717.5-1747.5	23.08	23.08	0.20324	13.479	13M5G7D
		16QAM		21.80	21.80	0.15136	13.471	13M5W7D
	20	QPSK	1720-1745	23.38	23.38	0.21777	17.961	18M0G7D
		16QAM		22.20	22.20	0.16596	17.965	18M0W7D
5	1.4	QPSK	824.7-848.3	23.08	20.93	0.12388	1.0984	1M10G7D
		16QAM		22.21	20.06	0.10139	1.1044	1M10W7D
	3	QPSK	825.5-847.5	23.07	20.92	0.12359	2.7030	2M70G7D
		16QAM		22.13	19.98	0.09954	2.7060	2M71W7D
	5	QPSK	826.5-846.5	23.06	20.91	0.12331	4.5109	4M51G7D
		16QAM		22.20	20.05	0.10116	4.5260	4M53W7D
	10	QPSK	829-844	23.25	21.10	0.12882	9.0106	9M01G7D
		16QAM		22.25	20.10	0.10233	9.0245	9M02W7D
12	1.4	QPSK	699.7-715.3	23.34	21.19	0.13152	1.0993	1M10G7D
		16QAM		22.82	20.67	0.11668	1.0974	1M10W7D
	3	QPSK	700.5-714.5	23.32	21.17	0.13092	2.7036	2M70G7D
		16QAM		22.91	20.76	0.11912	2.7073	2M71W7D
	5	QPSK	701.5-713.5	23.33	21.18	0.13122	4.5217	4M52G7D
		16QAM		22.83	20.68	0.11695	4.5218	4M52W7D

	10	QPSK	704-711	23.40	21.25	0.13335	9.0164	9M02G7D
		16QAM		22.93	20.78	0.11967	8.9957	9M00W7D
13	5	QPSK	779.5-784.5	23.33	21.18	0.13122	4.5279	4M53G7D
		16QAM		22.54	20.39	0.10940	4.5336	4M53W7D
	10	QPSK	782-782	23.35	21.20	0.13183	8.9627	8M96G7D
		16QAM		22.54	20.39	0.10940	8.9468	8M95W7D

Summary of Results:

Bands	BW	Modulation	Frequency Range	Max RF Output Power (dBm)		ERP/EIRP	99% BW	Emission Designator
	(MHz)		(MHz)	Conducted (Average)	ERP/EIRP (Average)	(W)	(MHz)	
25	1.4	QPSK	1850.7-1914.3	22.95	22.95	0.19724	1.1024	1M10G7D
		16QAM		21.99	21.99	0.15812	1.0997	1M10W7D
	3	QPSK	1851.5-1913.5	23.00	23.00	0.19953	2.7080	2M71G7D
		16QAM		21.85	21.85	0.15311	2.7060	2M71W7D
	5	QPSK	1852.5-1912.5	23.01	23.01	0.19999	4.5339	4M53G7D
		16QAM		21.87	21.87	0.15382	4.5324	4M53W7D
	10	QPSK	1855.0-1910.0	23.02	23.02	0.20045	8.9931	8M99G7D
		16QAM		21.75	21.75	0.14962	8.9822	8M98W7D
	15	QPSK	1857.5-1907.5	23.08	23.08	0.20324	13.452	13M5G7D
		16QAM		21.80	21.80	0.15136	13.480	13M5W7D
	20	QPSK	1860.0-1905.0	23.11	23.11	0.20464	17.938	17M9G7D
		16QAM		21.89	21.89	0.15453	17.954	18M0W7D
26	1.4	QPSK	824.7-848.3	23.09	20.94	0.12417	1.0989	1M10G7D
		16QAM		21.80	19.65	0.09226	1.1034	1M10W7D
	3	QPSK	825.5-847.5	23.09	20.94	0.12417	2.7080	2M71G7D
		16QAM		21.74	19.59	0.09099	2.6970	2M70W7D
	5	QPSK	826.5-846.5	22.96	20.81	0.12050	4.5379	4M54G7D
		16QAM		21.81	19.66	0.09247	4.5231	4M52W7D
	10	QPSK	829-844	23.10	20.95	0.12445	9.0080	9M01G7D
		16QAM		21.75	19.60	0.09120	8.9894	8M99W7D
	15	QPSK	831.5-841.5	23.13	20.98	0.12531	13.538	13M5G7D
		16QAM		21.83	19.68	0.09290	13.523	13M5W7D
26 (Part 90S)	1.4	QPSK	814.7-823.3	23.06	20.91	0.12331	1.1035	1M10G7D
		16QAM		21.77	19.62	0.09162	1.1010	1M10W7D
	3	QPSK	815.5-822.5	23.06	20.91	0.12331	2.7068	2M71G7D
		16QAM		21.71	19.56	0.09036	2.7107	2M71W7D
	5	QPSK	816.5-821.5	22.93	20.78	0.11967	4.5270	4M53G7D
		16QAM		21.78	19.63	0.09183	4.5279	4M53W7D
	10	QPSK	819	22.89	20.74	0.11858	9.0023	9M00G7D
		16QAM		21.41	19.26	0.08433	9.0312	9M03W7D

66	1.4	QPSK	1710.7-1779.3	23.45	23.45	0.22131	1.1026	1M10G7D
		16QAM		22.71	22.71	0.18664	1.1052	1M11W7D
	3	QPSK	1711.5-1778.5	23.58	23.58	0.22803	2.7109	2M72G7D
		16QAM		22.47	22.47	0.17660	2.7058	2M71W7D
	5	QPSK	1712.5-1777.5	23.50	23.50	0.22387	4.5332	4M53G7D
		16QAM		22.65	22.65	0.18408	4.5309	4M53W7D
	10	QPSK	1715-1775	23.47	23.47	0.22233	8.9935	8M99G7D
		16QAM		22.50	22.50	0.17783	8.9875	8M99W7D
	15	QPSK	1717.5-1772.5	23.44	23.44	0.22080	13.480	13M5G7D
		16QAM		22.50	22.50	0.17783	13.448	13M4W7D
	20	QPSK	1720-1770	23.61	23.61	0.22961	17.933	17M9G7D
		16QAM		22.65	22.65	0.18408	17.959	18M0W7D
71	5	QPSK	665.5-695.5	23.23	21.08	0.12823	4.5339	4M53G7D
		16QAM		22.44	20.29	0.10691	4.5270	4M53W7D
	10	QPSK	668-693	23.19	21.04	0.12706	8.9898	8M99G7D
		16QAM		22.29	20.14	0.10328	8.9849	8M98W7D
	15	QPSK	670.5-690.5	23.18	21.03	0.12677	13.451	13M5G7D
		16QAM		22.36	20.21	0.10495	13.457	13M5W7D
	20	QPSK	673-688	23.29	21.14	0.13002	17.886	17M9G7D
		16QAM		22.47	20.32	0.10765	17.916	17M9W7D

1.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested with associated equipment below.

1) Support Equipment

Description	Manufacturer	Model No.	Serial Number	Supplied by
Adaptor	N/A	CD139	20359	Applicant
PCB board	N/A	DSB75	--	Applicant
PCB board	N/A	AH8	--	Applicant
50 ohm terminal	N/A	N/A	N/A	UnionTrust

2) Support Cable

Cable No.	Description	Connector	Length	Supplied by
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1.5 TEST LOCATION

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: Unit D/E of 9/F and 16/F, Block A, Building 6, Baoneng science and technology park, Longhua district, Shenzhen, China
Telephone: +86 (0) 755 2823 0888
Fax: +86 (0) 755 2823 0886

1.6 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L9069
The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

A2LA-Lab Certificate No.: 4312.01
Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

ISED Wireless Device Testing Laboratories
CAB identifier: CN0032

FCC Accredited Lab.
Designation Number: CN1194
Test Firm Registration Number: 259480

1.7 DEVIATION FROM STANDARDS

None.

1.8 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

1.10 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Measurement Uncertainty
1	Conducted emission 9KHz-150KHz	±3.2 dB
2	Conducted emission 150KHz-30MHz	±2.7 dB
3	Radiated spurious emissions 30MHz-1GHz	± 4.9 dB
4	Radiated spurious emissions 1GHz-18GHz	± 4.8 dB
5	Radiated spurious emissions 18GHz-40GHz	± 5.1 dB
6	Occupied Bandwidth	± 1.86 %
7	DC Supply Voltages	± 0.68 %
8	Temperature	± 0.62 °C
9	Humidity	± 3.9 %
10	Conducted spurious emissions	± 2.7 dB
11	DC Supply Voltages	± 0.68 %
12	AC Supply Voltages	± 1.2 %
13	Radio Frequency	± 6.5 x 10^{-8}
14	RF Power, Conducted	± 0.9 dB

2. TEST SUMMARY

FCC 47 CFR Part 24 Test Cases (Band 2 & Band 25)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c) RSS-133 Issue 6,Amendment 1, Section 6.4	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c) RSS-133 Issue 6,Amendment 1, Section 6.4	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Peak-to-average ratio	FCC 47 CFR Part 24.232(d) RSS-133 Issue 6,Amendment 1, Section 6.4	KDB 971168 D01v03r01	Verified (NOTE 1, 2)
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) & FCC 47 CFR Part 24.238(b) RSS-Gen Issue 5, Section 6.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a) RSS-133 Issue 6,Amendment 1, Section 6.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)(b) RSS-133 Issue 6,Amendment 1, Section 6.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 24.238(a)(b) RSS-133 Issue 6,Amendment 1, Section 6.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 24.235 RSS-133 Issue 6,Amendment 1, Section 6.3	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)

FCC 47 CFR Part 27 Test Cases (LTE Band 4 & Band 66)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4) RSS-139 Issue 4, Section 6.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4) RSS-139 Issue 4, Section 6.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5) RSS-139 Issue 4, Section 6.5	KDB 971168 D01v03r01	Verified (NOTE 1, 2)
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) FCC 47 CFR Part 27.53(h) RSS-Gen Issue 5, Section 6.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(h)(1) RSS-139 Issue 4, Section 6.6	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(h) RSS-139 Issue 4, Section 6.6	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(h) RSS-139 Issue 4, Section 6.6	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54 RSS-139 Issue 4, Section 6.4	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)

FCC 47 CFR Part 22 Test Cases (Band 5 & Band 26)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a) RSS-132 Issue 4, Section 5.4	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a) RSS-132 Issue 4, Section 5.4	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Peak-to-average ratio	FCC 47 CFR Part 22.913(a) RSS-132 Issue 4, Section 5.4	KDB 971168 D01v03r01	Verified (NOTE 1, 2)
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) RSS-Gen Issue 5, Section 6.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a) RSS-132 Issue 4, Section 5.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a)(b) RSS-132 Issue 4, Section 5.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 22.917(a)(b) RSS-132 Issue 4, Section 5.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 22.355 RSS-132 Issue 4, Section 5.3	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)

FCC 47 CFR Part 27 Test Cases (LTE Band 12 & 71)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10) RSS-130 Issue 2, Section 4.6	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10) RSS-130 Issue 2, Section 4.6	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5) RSS-130 Issue 2, Section 4.6	KDB 971168 D01v03r01	Verified (NOTE 1, 2)
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) FCC 47 CFR Part 27.53(g) RSS-Gen Issue 5, Section 6.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(g) RSS-130 Issue 2, Section 4.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(g) RSS-130 Issue 2, Section 4.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(g) RSS-130 Issue 2, Section 4.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54 RSS-130 Issue 2, Section 4.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)

FCC 47 CFR Part 27 Test Cases (LTE Band 13)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(b)(10) RSS-130 Issue 2, Section 4.6	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(b)(10) RSS-130 Issue 2, Section 4.6	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5) RSS-130 Issue 2, Section 4.6	KDB 971168 D01v03r01	Verified (NOTE 1, 2)
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) RSS-Gen Issue 5, Section 6.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Band Edge at antenna terminals	FCC 47 CFR Part 27.53 RSS-130 Issue 2, Section 4.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53 RSS-130 Issue 2, Section 4.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53 RSS-130 Issue 2, Section 4.7	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54 RSS-130 Issue 2, Section 4.5	ANSI C63.26-2015 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)

FCC 47 CFR Part 90 Test Cases (LTE Band 26)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046 & FCC 47 CFR Part 90.635	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 90.635	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Peak-to-average ratio	N/A	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Emission Mask	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 90.691	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 90.691	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 90.691	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 90.213	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	Verified (NOTE 1, 2)

Note:

1) This report is based on the previous report that changed the software version. The main change is that the module only supports data services. Please refer to "***QIPPLS83-X_C2PC Cover Letter***" or "***7830A-PLS83X_IC_Request_Letter***" for more details. After the evaluation, all technical data is referred to previous report no. 200722022RFM-2 dated February 3, 2021.
2) Change the applicant's name from "Thales DIS AIS Deutschland GmbH" to "Telit Cinterion Deutschland GmbH".

3. EQUIPMENT LIST

Radiated Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☒	3M Chamber & Accessory Equipment	ETS-LINDGREN	3M	N/A	Dec. 03, 2018	Dec. 03, 2021
☒	Receiver	R&S	ESIB26	100114	Nov. 24, 2019	Nov. 23, 2020
☒	Broadband Antenna	ETS-LINDGREN	3142E	00201566	Nov. 16, 2019	Nov. 15, 2020
☒	6dB Attenuator	Talent	RA6A5-N-18	18103001	Nov. 16, 2019	Nov. 15, 2020
☒	Preamplifier	HP	8447F	2805A02960	Nov. 24, 2019	Nov. 23, 2020
☒	Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3117-PA	00201874	May. 30, 2020	May. 29, 2021
☒	Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3116C-PA	00202652	Nov. 16, 2019	Nov. 15, 2020
☒	Multi device Controller	ETS-LINDGREN	7006-001	00160105	N/A	N/A
☒	Test Software	Audix	e3	Software Version: 9.160323		

RF Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☒	Receiver	R&S	ESR7	1316.3003K07 -101181-K3	Nov. 24, 2019	Nov. 23, 2020
☒	EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY51440197	Nov. 24, 2019	Nov. 23, 2020
☒	Wideband Radio Communication Tester	R&S	CMW500	119583	Jul. 20, 2020	Jul. 19, 2021
☒	DC Source	KIKUSUI	PWR400L	LK003024	N/A	N/A
☒	Temp & Humidity chamber	Votisch	VT4002	58566133290 020	May. 11, 2020	May. 10, 2021

4. TEST CONFIGURATION

4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

Test Environment	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage (V)	Relative Humidity (%)
TN/VN	+15 to +35	3.8	20 to 75
TL/VL	-30	3.2	20 to 75
TH/VL	+65	3.2	20 to 75
TL/VH	-30	4.5	20 to 75
TH/VH	+65	4.5	20 to 75

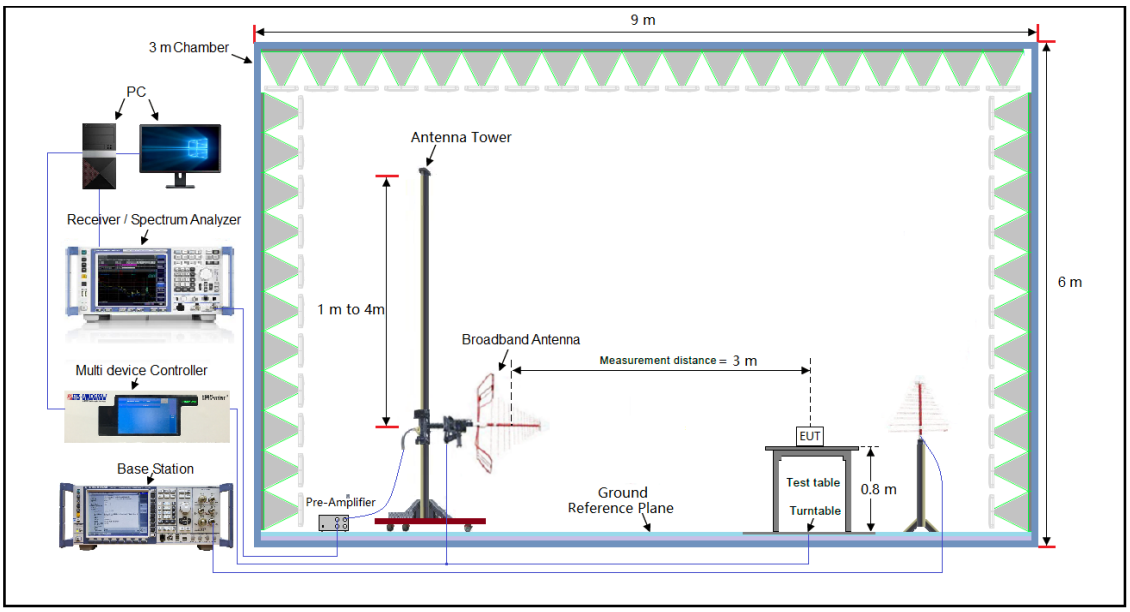
Remark:

1) The EUT just work in such extreme temperature of -30 °C to +65 °C and the extreme voltage of 3.2 V to 4.5V, so here the EUT is tested in the temperature of -30 °C to +65 °C and the voltage of 3.2 V to 4.5 V.
2) VN: Normal Voltage; TN: Normal Temperature;
TL: Low Extreme Test Temperature; TH: High Extreme Test Temperature;
VL: Low Extreme Test Voltage; VH: High Extreme Test Voltage.

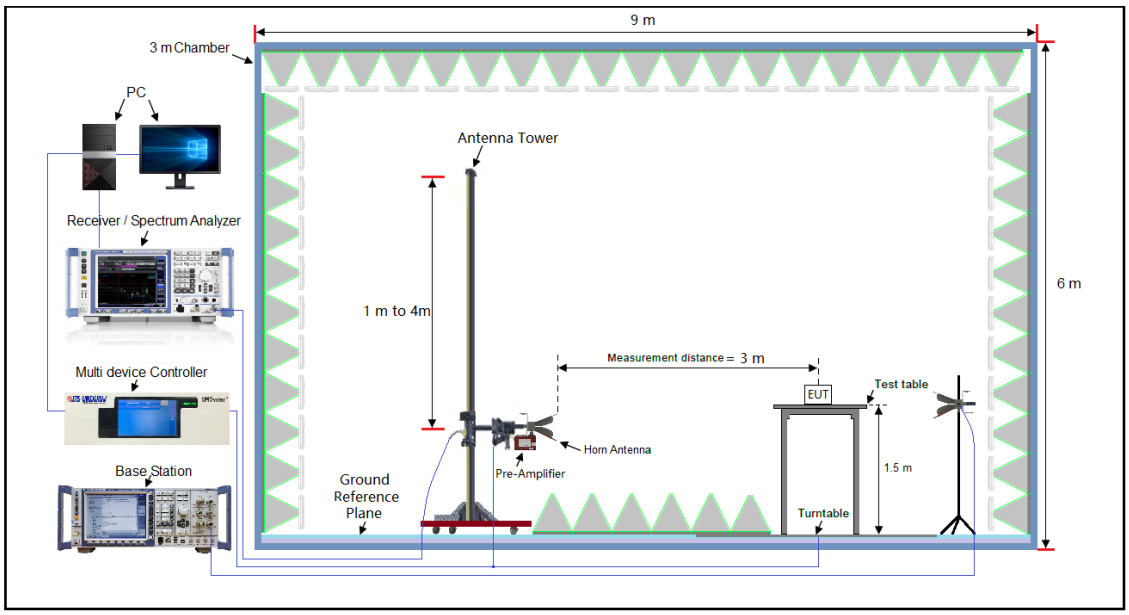
4.2 TEST SETUP

4.2.1 For Radiated Emissions test setup

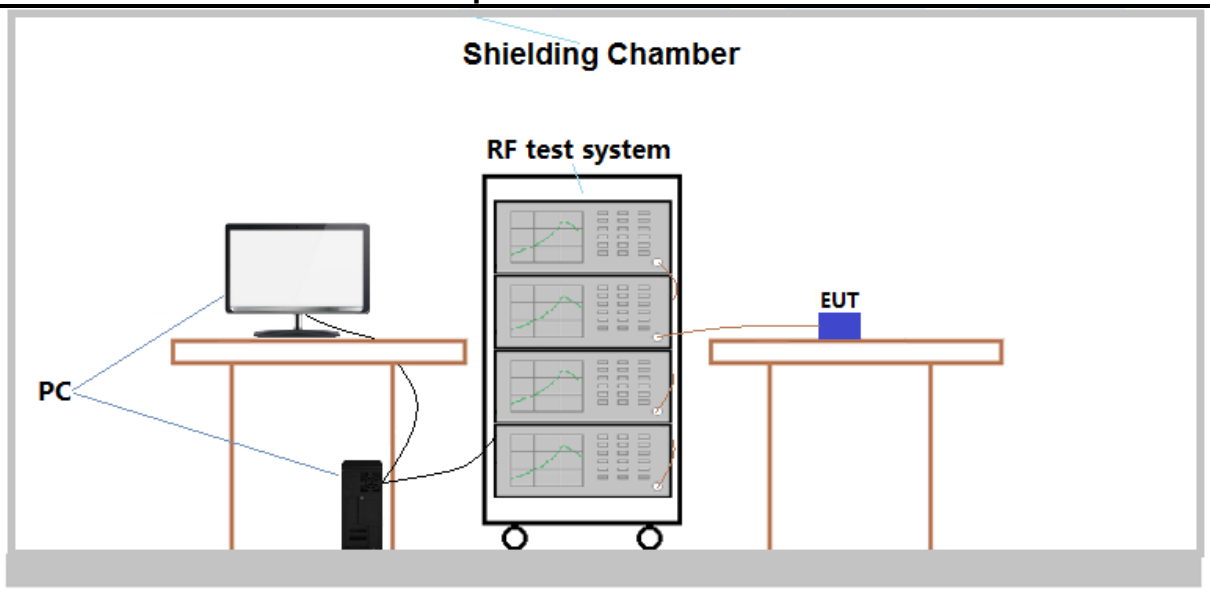
Radiated Emissions 30MHz to 1GHz Test setup



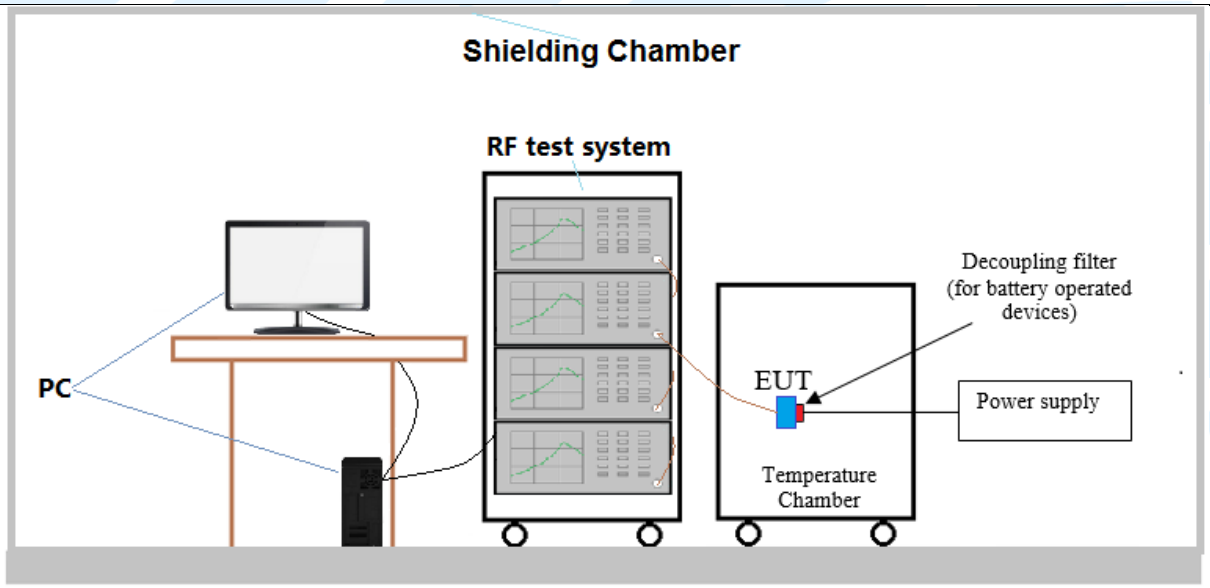
Radiated Emissions Above 1GHz Test setup



4.2.2 For Conducted RF test setup



Normal Environment



Extreme Environment

4.3 TEST CHANNELS

Band	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink (MHz)
LTE Band 2 TX: 1850-1910MHz	Low Range	1.4	18607	1850.7
		3	18615	1851.5
		5	18625	1852.5
		10	18650	1855
		15	18675	1857.5
		20	18700	1860
	Middle Range	1.4/3/5/10/15/20	18900	1880
	High Range	1.4	19193	1909.3
		3	19185	1908.5
		5	19175	1907.5
		10	19150	1905
		15	19125	1902.5
		20	19100	1900
LTE Band 4 TX: 1710-1755MHz	Low Range	1.4	19957	1710.7
		3	19965	1711.5
		5	19975	1712.5
		10	20000	1715
		15	20025	1717.5
		20	20050	1720
	Middle Range	1.4/3/5/10/ 15/20	20175	1732.5
	High Range	1.4	20393	1754.3
		3	20385	1753.5
		5	20375	1752.5
		10	20350	1750
		15	20325	1747.5
		20	20300	1745
LTE band 5 TX: 824–849MHz	Low Range	1.4	20407	824.7
		3	20415	825.5
		5	20425	826.5
		10	20450	829
	Middle Range	1.4/3/5/10	20525	836.5
	High Range	1.4	20643	848.3
		3	20635	847.5
		5	20625	846.5
		10	20600	844
LTE Band 12 TX: 699-716MHz	Low Range	1.4	23017	699.7
		3	23025	700.5
		5	23035	701.5
		10	23060	704
	Middle Range	1.4/3/5/10	23095	707.5
	High Range	1.4	23173	715.3
		3	23165	714.5
		5	23155	713.5

		10	23130	711
LTE Band 13 TX: 777-787MHz	Low Range	5	23205	779.5
		10	23230	782
	Middle Range	5/10	23230	782
	High Range	5	23255	784.5
		10	23230	782
LTE Band 25 TX: 1850-1915MHz	Low Range	1.4	26047	1850.7
		3	26055	1851.5
		5	26065	1852.5
		10	26090	1855
		15	26115	1857.5
		20	26140	1860
	Middle Range	1.4/3/5/10/15/20	26340	1880
	High Range	1.4	26683	1914.3
		3	26675	1913.5
		5	26665	1912.5
		10	26640	1910
		15	26615	1907.5
		20	26590	1905
LTE band 26 TX:824–849MHz	Low Range	1.4	26797	824.7
		3	26805	825.5
		5	26815	826.5
		10	26840	829
		15	26865	831.5
	Middle Range	1.4/3/5/10/15	26915	836.5
	High Range	1.4	27033	848.3
		3	27025	847.5
		5	27015	846.5
		10	26990	844
		15	26965	841.5
LTE band 26 TX: 814-824MHz	Low Range	1.4	26697	814.7
		3	26705	815.5
		5	26715	816.5
		10	/	/
		15	26765	821.5
	Middle Range	1.4/3/5/10	26740	819
	High Range	1.4	26783	823.3
		3	26775	822.5
		5	26765	821.5
		10	/	/
		15	/	/

LTE Band 66 TX: 1710-1780MHz	Low Range	1.4	131979	1710.7
		3	131987	1711.5
		5	131997	1712.5
		10	132022	1715
		15	132047	1717.5
		20	132072	1720
	Middle Range	1.4/3/5/10/ 15/20	132322	1745
	High Range	1.4	132665	1779.3
		3	132657	1778.5
		5	132647	1777.5
		10	132622	1775
		15	132597	1772.5
		20	132572	1770
LTE Band 71 TX: 663–698MHz	Low Range	5	133147	665.5
		10	133172	668
		15	133197	670.5
		20	133222	673
	Middle Range	5/10/15	133297	680.5
		20	133322	683
	High Range	5	133447	695.5
		10	133422	693
		15	133397	690.5
		20	133372	688

4.4 SYSTEM TEST CONFIGURATION

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. Only the worst case data were recorded in this test report.

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, X/Y/Z axis, and antenna ports.
The worst case was found when positioned as the table below.

Band	Mode	Antenna Port	Worst-case axis positioning
LTE Band 2	1TX	Chain 0	Z axis
LTE Band 4	1TX	Chain 0	Z axis
LTE Band 5	1TX	Chain 0	Z axis
LTE Band 12	1TX	Chain 0	Z axis
LTE Band 13	1TX	Chain 0	Z axis
LTE Band 25	1TX	Chain 0	Z axis
LTE Band 26	1TX	Chain 0	Z axis
LTE Band 66	1TX	Chain 0	Z axis
LTE Band 71	1TX	Chain 0	Z axis

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000MHz. The resolution is 1 MHz or greater for frequencies above 1000MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

4.5 PRE-SCAN

Pre-scan under all rate at lowest middle and highest channel, find the transmitter power as below.

4.5.1 LTE Band 2

LTE Band 2 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
QPSK	1	0	22.41	22.84	22.76	1	0	22.39	22.82	22.83
	1	2	23.36	23.24	23.03	1	7	23.44	23.17	22.95
	1	5	22.94	22.78	22.79	1	14	22.97	22.67	22.86
	3	0	22.93	23.08	23.06	8	0	21.92	22.08	22.02
	3	1	22.88	22.99	22.88	8	3	21.93	22.02	21.89
	3	3	22.85	23.04	22.92	8	7	21.84	22.04	22.01
	6	0	21.87	21.95	21.78	15	0	21.94	22.03	21.79
16QAM	1	0	21.98	22.14	21.84	1	0	22.03	22.14	21.96
	1	2	22.84	22.49	22.23	1	7	22.73	22.39	22.14
	1	5	21.69	22.06	21.27	1	14	21.55	22.23	21.26
	3	0	22.15	22.04	21.95	8	0	21.02	20.89	21.06
	3	1	23.03	22.91	22.94	8	3	22.06	21.84	22.08
	3	3	21.94	21.79	21.95	8	7	21.03	20.79	20.93
	6	0	20.93	20.79	20.95	15	0	20.86	20.84	20.89
	Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
QPSK	1	0	22.45	22.85	22.85	1	0	22.51	22.73	22.83
	1	12	23.29	23.23	22.96	1	24	23.40	23.34	23.04
	1	24	23.04	22.75	22.91	1	49	22.96	22.79	22.86
	12	0	21.87	22.17	21.98	25	0	21.91	22.18	22.14
	12	6	21.80	22.00	22.03	25	12	21.93	21.99	21.95
	12	13	21.96	22.06	22.00	25	25	21.82	21.90	21.87
	25	0	21.95	21.98	21.92	50	0	21.94	21.96	21.91
16QAM	1	0	22.12	22.07	21.79	1	0	22.13	22.11	21.96
	1	12	22.89	22.56	22.16	1	24	22.80	22.37	22.11
	1	24	21.59	22.17	21.18	1	49	21.69	22.17	21.16
	12	0	21.03	21.01	21.02	25	0	21.03	20.88	21.05
	12	6	21.93	21.99	22.10	25	12	21.92	21.83	22.05
	12	13	20.90	20.87	21.06	25	25	20.95	20.81	20.90
	25	0	20.84	20.96	20.98	50	0	20.90	20.82	20.86
	Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
QPSK	1	0	22.53	22.71	22.85	1	0	22.56	22.85	22.90
	1	37	23.26	23.30	22.87	1	50	**23.46**	23.35	23.06
	1	74	23.03	22.70	22.88	1	99	23.10	22.85	22.95
	37	0	21.93	22.15	22.03	50	0	21.97	22.23	22.16
	37	19	21.92	22.00	22.01	50	25	21.98	22.16	22.07
	37	39	21.92	22.02	21.97	50	50	21.99	22.07	22.02
	75	0	21.91	21.94	21.80	100	0	22.01	22.05	21.96
16QAM	1	0	22.08	22.09	21.88	1	0	22.15	22.18	21.98
	1	37	22.88	22.56	22.17	1	50	22.89	22.57	22.29
	1	74	21.66	22.12	21.30	1	99	21.74	22.26	21.35
	37	0	20.98	21.01	21.03	50	0	21.16	21.06	21.11
	37	19	22.05	21.94	22.04	50	25	22.07	22.03	22.11
	37	39	21.01	20.83	21.05	50	50	21.05	20.90	21.07
	75	0	20.79	20.89	20.85	100	0	20.95	20.97	20.99

4.5.2 LTE Band 4

LTE Band 4 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	22.73	22.63	22.35	1	0	22.72	22.62	22.39
	1	2	22.85	22.91	22.79	1	7	23.00	22.99	22.90
	1	5	22.59	22.95	22.60	1	14	22.76	22.94	22.71
	3	0	22.70	22.70	22.68	8	0	21.71	21.78	21.65
	3	1	22.62	22.81	22.87	8	3	21.61	21.75	21.92
	3	3	22.74	22.68	22.78	8	7	21.76	21.75	21.95
	6	0	21.64	21.66	21.71	15	0	21.54	21.80	21.77
16QAM	1	0	21.05	21.51	21.64	1	0	20.96	21.40	21.64
	1	2	21.43	21.56	21.73	1	7	21.47	21.54	21.85
	1	5	21.43	21.59	21.82	1	14	21.37	21.58	21.83
	3	0	21.67	21.82	21.96	8	0	20.64	20.73	20.89
	3	1	21.85	21.68	21.96	8	3	20.78	20.69	21.01
	3	3	21.75	21.80	21.99	8	7	20.83	20.85	20.99
	6	0	20.77	20.66	20.84	15	0	20.73	20.68	20.93
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	22.77	22.67	22.41	1	0	22.82	22.66	22.32
	1	12	23.01	22.92	22.82	1	24	22.86	23.02	22.87
	1	24	22.61	22.95	22.59	1	49	22.66	22.90	22.57
	12	0	21.76	21.78	21.56	25	0	21.79	21.81	21.77
	12	6	21.70	21.69	22.04	25	12	21.73	21.69	21.96
	12	13	21.60	21.81	21.94	25	25	21.70	21.78	21.96
	25	0	21.56	21.80	21.77	50	0	21.54	21.69	21.66
16QAM	1	0	21.10	21.57	21.63	1	0	21.11	21.45	21.63
	1	12	21.47	21.63	21.87	1	24	21.38	21.48	21.75
	1	24	21.47	21.69	21.64	1	49	21.50	21.56	21.74
	12	0	20.65	20.64	21.01	25	0	20.69	20.73	20.95
	12	6	20.74	20.60	20.93	25	12	20.84	20.69	21.01
	12	13	20.80	20.73	21.01	25	25	20.72	20.71	20.92
	25	0	20.63	20.75	20.91	50	0	20.71	20.70	20.83
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	22.72	22.55	22.34	1	0	22.83	23.01	22.92
	1	37	22.90	23.08	22.91	1	50	23.18	23.38	23.32
	1	74	22.69	22.85	22.58	1	99	22.68	22.97	22.90
	37	0	21.68	21.69	21.58	50	0	21.95	21.85	22.06
	37	19	21.65	21.72	22.04	50	25	21.90	22.00	22.01
	37	39	21.70	21.67	21.82	50	50	21.87	21.96	21.91
	75	0	21.68	21.72	21.68	100	0	22.06	21.76	21.94
16QAM	1	0	20.98	21.49	21.66	1	0	21.56	21.68	21.40
	1	37	21.45	21.58	21.74	1	50	21.96	21.92	22.18
	1	74	21.48	21.63	21.80	1	99	22.20	22.14	21.45
	37	0	20.75	20.79	20.94	50	0	21.36	21.10	21.18
	37	19	20.79	20.66	20.96	50	25	21.04	21.10	21.02
	37	39	20.81	20.84	20.87	50	50	21.12	21.09	20.99
	75	0	20.75	20.67	20.88	100	0	21.09	20.89	21.04

4.5.3 LTE Band 5

LTE Band 5 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	22.99	22.47	22.35	1	0	23.00	22.50	22.40
	1	2	23.08	22.65	22.86	1	7	23.07	22.79	22.91
	1	5	22.85	22.34	22.49	1	14	23.02	22.43	22.35
	3	0	22.86	22.50	22.81	8	0	21.88	21.66	21.80
	3	1	22.94	22.66	22.79	8	3	21.88	21.67	21.82
	3	3	22.63	22.66	22.81	8	7	21.70	21.70	21.89
	6	0	21.76	21.54	21.81	15	0	21.80	21.61	21.81
16QAM	1	0	21.65	21.31	21.43	1	0	21.56	21.23	21.40
	1	2	21.90	21.79	22.21	1	7	22.01	21.71	22.13
	1	5	21.47	21.57	21.16	1	14	21.44	21.55	21.33
	3	0	21.93	21.71	21.79	8	0	20.90	20.72	20.84
	3	1	22.00	21.79	21.85	8	3	21.01	20.75	20.88
	3	3	21.88	21.85	21.66	8	7	20.88	20.84	20.75
	6	0	20.81	20.62	20.86	15	0	20.77	20.57	20.85
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	23.06	22.46	22.43	1	0	23.10	22.60	22.51
	1	12	23.06	22.83	22.99	1	24	**23.25**	22.84	23.02
	1	24	22.84	22.47	22.44	1	49	23.04	22.49	22.51
	12	0	21.76	21.55	21.80	25	0	21.90	21.66	21.81
	12	6	21.84	21.61	21.77	25	12	21.97	21.81	21.94
	12	13	21.69	21.66	21.85	25	25	21.80	21.75	21.89
	25	0	21.87	21.65	21.77	50	0	21.90	21.73	21.87
16QAM	1	0	21.56	21.37	21.35	1	0	21.68	21.40	21.53
	1	12	21.83	21.65	22.20	1	24	22.01	21.80	22.25
	1	24	21.54	21.54	21.29	1	49	21.60	21.60	21.36
	12	0	20.89	20.73	20.78	25	0	20.97	20.80	20.93
	12	6	20.92	20.68	20.80	25	12	21.05	20.82	20.93
	12	13	20.88	20.86	20.77	25	25	20.90	20.92	20.85
	25	0	20.73	20.63	20.73	50	0	20.88	20.70	20.88

4.5.4 LTE Band 12

LTE Band 12 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	23.10	23.05	23.24	1	0	23.08	22.99	23.13
	1	2	23.34	23.28	23.16	1	7	23.25	23.32	23.05
	1	5	23.16	22.81	22.95	1	14	23.19	22.87	23.05
	3	0	23.08	23.13	23.05	8	0	22.09	22.23	22.22
	3	1	23.20	23.18	23.08	8	3	22.16	22.19	22.22
	3	3	23.23	23.11	23.15	8	7	22.13	22.01	22.13
	6	0	22.10	22.13	22.20	15	0	22.15	22.18	22.23
16QAM	1	0	21.93	22.10	22.08	1	0	21.96	22.14	22.08
	1	2	22.24	22.82	22.14	1	7	22.27	22.91	22.16
	1	5	21.65	21.94	21.95	1	14	21.57	22.05	22.13
	3	0	22.13	22.08	22.14	8	0	21.19	20.99	21.04
	3	1	22.00	22.02	22.04	8	3	21.07	21.02	21.05
	3	3	22.10	22.09	22.82	8	7	21.12	21.01	21.89
	6	0	21.81	21.68	21.83	15	0	21.82	21.67	21.69
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	23.08	22.99	23.29	1	0	23.14	23.15	23.33
	1	12	23.28	23.33	23.14	1	24	**23.40**	23.38	23.22
	1	24	23.07	22.76	23.07	1	49	23.24	22.96	23.10
	12	0	22.19	22.19	22.07	25	0	22.21	22.25	22.23
	12	6	22.11	22.12	22.06	25	12	22.25	22.23	22.24
	12	13	22.07	22.16	22.01	25	25	22.27	22.20	22.15
	25	0	22.23	22.21	22.10	50	0	22.24	22.25	22.23
16QAM	1	0	22.03	22.05	22.08	1	0	22.10	22.17	22.17
	1	12	22.27	22.83	22.16	1	24	22.33	22.93	22.20
	1	24	21.51	21.92	21.98	1	49	21.65	22.08	22.14
	12	0	21.18	21.06	21.02	25	0	21.33	21.14	21.16
	12	6	21.04	21.09	21.12	25	12	21.13	21.16	21.13
	12	13	21.11	20.91	21.86	25	25	21.28	21.11	21.89
	25	0	21.72	21.65	21.76	50	0	21.84	21.83	21.85

4.5.5 LTE Band 13

LTE Band 13 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
QPSK	1	0	23.25	23.32	23.33	1	0	/	**23.35**	/
	1	12	23.19	23.15	23.17	1	24	/	23.24	/
	1	24	22.97	23.14	23.06	1	49	/	23.15	/
	12	0	22.07	22.22	22.13	25	0	/	22.22	/
	12	6	22.18	22.07	22.05	25	12	/	22.19	/
	12	13	22.06	21.94	22.03	25	25	/	22.13	/
	25	0	21.97	21.99	22.07	50	0	/	22.14	/
16QAM	1	0	22.12	22.08	22.13	1	0	/	22.18	/
	1	12	22.38	22.54	22.49	1	24	/	22.54	/
	1	24	21.98	22.13	22.09	1	49	/	22.16	/
	12	0	21.00	21.04	21.10	25	0	/	21.16	/
	12	6	21.04	21.11	21.18	25	12	/	21.19	/
	12	13	21.17	21.11	21.01	25	25	/	21.20	/
	25	0	21.10	21.15	21.17	50	0	/	21.18	/

4.5.6 LTE Band 25

LTE Band 25 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
QPSK	1	0	22.73	22.63	22.35	1	0	22.72	22.62	22.39
	1	2	22.85	22.91	22.79	1	7	23.00	22.99	22.90
	1	5	22.59	22.95	22.60	1	14	22.76	22.94	22.71
	3	0	22.70	22.70	22.40	8	0	21.71	21.78	22.40
	3	1	22.62	22.81	22.87	8	3	21.61	21.75	21.92
	3	3	22.74	22.68	22.78	8	7	21.76	21.75	21.95
	6	0	21.64	21.66	21.22	15	0	21.54	21.80	21.50
16QAM	1	0	21.05	21.51	21.64	1	0	20.96	21.40	21.64
	1	2	21.43	21.56	21.73	1	7	21.47	21.54	21.85
	1	5	21.43	21.59	21.82	1	14	21.37	21.58	21.83
	3	0	21.67	21.82	21.96	8	0	20.64	20.73	20.89
	3	1	21.85	21.68	21.96	8	3	20.78	20.69	21.01
	3	3	21.75	21.80	21.99	8	7	20.83	20.85	20.99
	6	0	20.77	20.66	20.84	15	0	20.73	20.68	20.93

LTE Band 25 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	22.77	22.67	22.41	1	0	22.82	22.66	22.32
	1	12	23.01	22.92	22.82	1	24	22.86	23.02	22.87
	1	24	22.61	22.95	22.59	1	49	22.66	22.90	22.57
	12	0	21.76	21.78	22.40	25	0	21.79	21.81	22.40
	12	6	21.70	21.69	22.04	25	12	21.73	21.69	21.96
	12	13	21.60	21.81	21.94	25	25	21.70	21.78	21.96
	25	0	21.56	21.80	21.97	50	0	21.54	21.69	21.95
16QAM	1	0	21.10	21.57	21.63	1	0	21.11	21.45	21.63
	1	12	21.47	21.63	21.87	1	24	21.38	21.48	21.75
	1	24	21.47	21.69	21.64	1	49	21.50	21.56	21.74
	12	0	20.65	20.64	21.01	25	0	20.69	20.73	20.95
	12	6	20.74	20.60	20.93	25	12	20.84	20.69	21.01
	12	13	20.80	20.73	21.01	25	25	20.72	20.71	20.92
	25	0	20.63	20.75	20.91	50	0	20.71	20.70	20.83
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	22.72	22.55	22.34	1	0	22.88	22.70	22.51
	1	37	22.90	23.08	22.91	1	50	23.01	**23.11**	22.96
	1	74	22.69	22.85	22.58	1	99	22.79	23.03	22.75
	37	0	21.68	21.69	21.72	50	0	21.80	21.86	22..08
	37	19	21.65	21.72	22.04	50	25	21.76	21.83	22.05
	37	39	21.70	21.67	21.82	50	50	21.77	21.82	21.98
	75	0	21.68	21.72	21.66	100	0	21.70	21.84	21.60
16QAM	1	0	20.98	21.49	21.66	1	0	21.14	21.60	21.70
	1	37	21.45	21.58	21.74	1	50	21.55	21.63	21.89
	1	74	21.48	21.63	21.80	1	99	21.54	21.71	21.84
	37	0	20.75	20.79	20.94	50	0	20.80	20.84	21.03
	37	19	20.79	20.66	20.96	50	25	20.88	20.78	21.04
	37	39	20.81	20.84	20.87	50	50	20.87	20.88	21.06
	75	0	20.75	20.67	20.88	100	0	20.78	20.84	21.01

4.5.7 LTE Band 26

LTE Band 26 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	22.66	22.53	22.29	1	0	22.63	22.67	22.28
	1	2	23.09	22.96	22.55	1	7	23.03	23.09	22.48
	1	5	22.60	22.83	22.26	1	14	22.54	22.70	22.28
	3	0	22.72	22.41	22.48	8	0	21.66	21.47	21.36
	3	1	22.54	22.44	22.44	8	3	21.65	21.41	21.54
	3	3	22.60	22.41	22.57	8	7	21.65	21.46	21.41
	6	0	21.57	21.38	21.50	15	0	21.53	21.50	21.36
16QAM	1	0	21.41	21.45	21.54	1	0	21.52	21.49	21.55
	1	2	21.61	21.37	21.80	1	7	21.63	21.47	21.74
	1	5	21.23	21.45	21.46	1	14	21.08	21.43	21.56
	3	0	21.34	21.55	21.50	8	0	20.37	20.41	20.42
	3	1	21.57	21.52	21.41	8	3	20.60	20.45	20.55
	3	3	21.58	21.35	21.47	8	7	20.45	20.38	20.48
	6	0	20.54	20.39	20.43	15	0	20.64	20.31	20.36
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	22.57	22.70	22.20	1	0	22.67	22.63	22.26
	1	12	22.96	22.94	22.55	1	24	23.10	22.92	22.44
	1	24	22.69	22.71	22.37	1	49	22.54	22.79	22.25
	12	0	21.56	21.41	21.36	25	0	21.60	21.48	21.41
	12	6	21.67	21.57	21.37	25	12	21.61	21.47	21.38
	12	13	21.52	21.36	21.57	25	25	21.61	21.52	21.57
	25	0	21.64	21.52	21.48	50	0	21.50	21.51	21.38
16QAM	1	0	21.54	21.45	21.61	1	0	21.36	21.44	21.60
	1	12	21.51	21.43	21.81	1	24	21.45	21.38	21.75
	1	24	21.11	21.50	21.64	1	49	21.17	21.42	21.48
	12	0	20.28	20.56	20.40	25	0	20.37	20.41	20.39
	12	6	20.55	20.37	20.48	25	12	20.59	20.42	20.45
	12	13	20.47	20.36	20.52	25	25	20.50	20.50	20.49
	25	0	20.60	20.34	20.44	50	0	20.49	20.44	20.48

LTE Band 26					
Modulation	RB		Test Channel		
	Size	Offset	Low	Mid	High
Channel Bandwidth: 15 MHz					
QPSK	1	0	22.76	22.72	22.40
	1	12	**23.13**	23.10	22.64
	1	24	22.71	22.88	22.45
	12	0	21.75	21.57	21.52
	12	6	21.74	21.60	21.55
	12	13	21.68	21.54	21.59
	25	0	21.65	21.54	21.56
16QAM	1	0	21.55	21.57	21.62
	1	12	21.64	21.53	21.83
	1	24	21.25	21.51	21.64
	12	0	20.45	20.60	20.52
	12	6	20.60	20.54	20.55
	12	13	20.62	20.52	20.59
	25	0	20.69	20.47	20.54

4.5.8 LTE Band 26 (Part 90S)

LTE Band 26 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
QPSK	1	0	22.63	22.50	22.26	1	0	22.60	22.64	22.25
	1	2	23.06	22.93	22.52	1	7	23.00	23.06	22.45
	1	5	22.57	22.80	22.23	1	14	22.51	22.67	22.25
	3	0	22.69	22.38	22.45	8	0	21.63	21.44	21.33
	3	1	22.51	22.41	22.41	8	3	21.62	21.38	21.51
	3	3	22.57	22.38	22.54	8	7	21.62	21.43	21.38
	6	0	21.54	21.35	21.47	15	0	21.50	21.47	21.33
16QAM	1	0	21.38	21.42	21.51	1	0	21.49	21.46	21.52
	1	2	21.58	21.34	21.77	1	7	21.60	21.44	21.71
	1	5	21.20	21.42	21.43	1	14	21.05	21.40	21.53
	3	0	21.31	21.52	21.47	8	0	20.34	20.38	20.39
	3	1	21.54	21.49	21.38	8	3	20.57	20.42	20.52
	3	3	21.55	21.32	21.44	8	7	20.42	20.35	20.45
	6	0	20.51	20.36	20.40	15	0	20.61	20.28	20.33

LTE Band 26 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
QPSK	1	0	22.54	22.67	22.17	1	0	/	22.60	/
	1	12	22.93	22.91	22.52	1	24	/	22.89	/
	1	24	22.66	22.68	22.34	1	49	/	22.76	/
	12	0	21.53	21.38	21.33	25	0	/	21.45	/
	12	6	21.64	21.54	21.34	25	12	/	21.44	/
	12	13	21.49	21.33	21.54	25	25	/	21.49	/
	25	0	21.61	21.49	21.45	50	0	/	21.48	/
16QAM	1	0	21.51	21.42	21.58	1	0	/	21.41	/
	1	12	21.48	21.40	21.78	1	24	/	21.35	/
	1	24	21.08	21.47	21.61	1	49	/	21.39	/
	12	0	20.25	20.53	20.37	25	0	/	20.38	/
	12	6	20.52	20.34	20.45	25	12	/	20.39	/
	12	13	20.44	20.33	20.49	25	25	/	20.47	/
	25	0	20.57	20.31	20.41	50	0	/	20.41	/

4.5.9 LTE Band 66

LTE Band 66 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	23.24	23.40	23.45	1	0	23.20	23.49	23.58
	1	2	23.35	23.40	23.37	1	7	23.47	23.34	23.38
	1	5	23.06	23.20	23.36	1	14	23.05	23.11	23.25
	3	0	23.14	23.14	23.17	8	0	22.22	22.16	22.11
	3	1	23.25	23.25	23.11	8	3	22.18	22.27	22.25
	3	3	23.10	23.10	23.26	8	7	22.00	22.12	22.21
	6	0	22.21	22.19	22.23	15	0	22.30	22.13	22.21
16QAM	1	0	22.10	22.38	22.10	1	0	22.17	22.47	22.12
	1	2	22.35	22.60	22.24	1	7	22.47	22.47	22.31
	1	5	22.36	22.25	22.02	1	14	22.32	22.26	22.01
	3	0	22.61	22.58	22.50	8	0	21.55	21.58	21.50
	3	1	22.63	22.33	22.11	8	3	21.64	21.30	21.22
	3	3	22.51	22.71	22.14	8	7	21.49	21.70	21.25
	6	0	21.38	21.50	21.21	15	0	21.54	21.53	21.24
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	23.24	23.37	23.50	1	0	23.24	23.37	23.47
	1	12	23.45	23.34	23.35	1	24	23.36	23.38	23.37
	1	24	23.10	23.27	23.35	1	49	23.10	23.10	23.27
	12	0	22.33	22.11	22.10	25	0	22.20	22.13	22.24
	12	6	22.13	22.21	22.22	25	12	22.13	22.16	22.23
	12	13	22.01	22.28	22.17	25	25	22.11	22.14	22.15
	25	0	22.26	22.13	22.28	50	0	22.21	22.05	22.24
16QAM	1	0	22.21	22.47	22.09	1	0	22.19	22.42	22.16
	1	12	22.31	22.65	22.25	1	24	22.34	22.50	22.37
	1	24	22.39	22.28	22.02	1	49	22.26	22.18	21.96
	12	0	21.57	21.65	21.65	25	0	21.61	21.63	21.64
	12	6	21.53	21.36	21.14	25	12	21.48	21.32	21.22
	12	13	21.49	21.75	21.28	25	25	21.49	21.75	21.23
	25	0	21.54	21.47	21.27	50	0	21.51	21.49	21.24
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	23.28	23.48	23.44	1	0	23.32	23.53	23.61
	1	37	23.30	23.45	23.44	1	50	23.47	23.50	23.48
	1	74	22.92	23.22	23.40	1	99	23.12	23.29	23.42
	37	0	22.15	22.07	22.21	50	0	22.33	22.25	22.24
	37	19	22.24	22.27	22.24	50	25	22.31	22.28	22.25
	37	39	21.98	22.19	22.24	50	50	22.12	22.29	22.27
	75	0	22.23	22.11	22.25	100	0	22.32	22.24	22.30
16QAM	1	0	22.09	22.44	22.12	1	0	22.26	22.48	22.22
	1	37	22.49	22.50	22.30	1	50	22.49	22.65	22.42
	1	74	22.35	22.17	22.11	1	99	22.43	22.31	22.14
	37	0	21.69	21.58	21.52	50	0	21.70	21.71	21.68
	37	19	21.53	21.29	21.22	50	25	21.68	21.47	21.27
	37	39	21.38	21.77	21.15	50	50	21.57	21.83	21.29
	75	0	21.36	21.58	21.11	100	0	21.55	21.59	21.27

4.5.10 LTE Band 71

LTE Band 71 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	22.92	22.54	22.77	1	0	22.86	22.56	22.82
	1	12	23.03	22.71	23.23	1	24	23.08	22.74	23.19
	1	24	23.04	22.65	22.81	1	49	23.00	22.81	22.79
	12	0	21.90	21.91	21.96	25	0	22.05	21.88	21.88
	12	6	22.15	22.01	21.92	25	12	22.09	22.01	21.95
	12	13	22.13	21.92	22.02	25	25	22.02	21.89	22.07
	25	0	22.13	21.93	21.99	50	0	22.08	22.02	22.05
16QAM	1	0	21.46	21.59	21.73	1	0	21.41	21.68	21.90
	1	12	22.12	22.44	21.95	1	24	22.13	22.29	21.98
	1	24	21.52	21.55	21.69	1	49	21.50	21.54	21.66
	12	0	20.95	21.16	20.87	25	0	20.83	21.17	21.03
	12	6	21.00	21.19	21.11	25	12	21.09	21.23	20.95
	12	13	21.18	20.91	21.13	25	25	21.11	21.04	21.02
	25	0	21.10	21.04	21.06	50	0	20.96	21.06	21.06
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	22.85	22.61	22.77	1	0	22.93	22.67	22.89
	1	37	22.90	22.85	23.18	1	50	23.10	22.89	**23.29**
	1	74	23.11	22.81	22.78	1	99	23.12	22.83	22.91
	37	0	22.02	22.03	21.85	50	0	22.10	22.07	22.01
	37	19	22.07	22.03	22.02	50	25	22.18	22.10	22.07
	37	39	22.01	21.97	22.04	50	50	22.16	22.04	22.16
	75	0	22.00	22.01	21.94	100	0	22.19	22.05	22.06
16QAM	1	0	21.39	21.67	21.85	1	0	21.54	21.78	21.90
	1	37	22.29	22.36	21.98	1	50	22.31	22.47	22.02
	1	74	21.64	21.59	21.61	1	99	21.69	21.72	21.73
	37	0	20.91	21.14	21.01	50	0	21.01	21.21	21.07
	37	19	20.96	21.21	20.99	50	25	21.15	21.27	21.12
	37	39	21.17	21.08	21.11	50	50	21.20	21.11	21.17
	75	0	20.95	20.98	21.04	100	0	21.15	21.17	21.11

Pre-scan all bandwidth and RB, find worse case mode are chosen to the report, the LTE worse case mode applicability and tested channel detail as below:

Item	Band	Bandwidth(MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
ERP/EIRP	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☐	☐	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	13	-	-	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	25	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	26	☒	☒	☒	☒	☒	--	☒	☒	☒	☒	☐	☐	☒	☒	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
Conducted output power	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☒	☒	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
	13	-	-	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
	25	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	26	☒	☒	☒	☒	☒	--	☒	☒	☒	☒	☒	☒	☒	☒	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒